

COURSE STRUCTURE

2025-10147 Computer science (EN) Bachelor

1						
No	Course code	Title		Th	Pr	Ects
1	TRX 111	History of Azerbaijan		2	2+0	5
2	IT 139	Fundamentals of programming-1		2	2+1	7
3	XXX XXX	[NAE] Foreign language I		0	6+0	5
4	XXX XXX	[AE] Area elective course I #1		2	2+0	8
5	XXX XXX	[NAE] Foreign language II		0	6+0	5
Subtotal: 30						

2						
No	Course code	Title		Th	Pr	Ects
1	MATH 180	Mathematical analysis- 1		3	2+0	7
2	AZD 140	Official and Academic Communication in the Azerbaijani language		0	2+0	4
3	MATH 168	Linear Algebra		2	1+0	4
4	PHYS 155	Physics		2	1+0	3
5	IT 138	Fundamentals of programming-2		2	2+1	7
6	XXX XXX	[NAE] Foreign language III		0	6+0	5
Subtotal: 30						

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№	Course code	Title	Th	Pr	Ects
1	MATH 286	Mathematical analysis	2	2+0	5
2	CENG 203	Computer architecture	2	2+0	5
3	CENG 205	Algorithm analysis and preparation methods	2	2+2	8
4	MATH 361	Discrete Mathematics	2	2+0	6
5	XXX XXX	[NAE] Area elective course II #2	1	1+0	3
6	XXX XXX	[NAE] Non area elective course I #3	2	0+0	3

Subtotal: 30

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№	Course code	Title	Th	Pr	Ects
1	MATH 267	Complex analysis	2	1+0	4
2	COMP 325	Operating Systems	2	2+0	5
3	MATH 269	Analytical geometry	2	1+0	4
4	CENG 206	Web technologies	2	2+0	4
5	CENG 207	Database	2	2+0	5
6	XXX XXX	[AE] Area elective course III #4	2	2+0	5
7	XXX XXX	[NAE] Non area elective course II #5	2	0+0	3

Subtotal: 30

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№	Course code	Title	Th	Pr	Ects
1	IT 371	Programming technologies	2	2+0	5
2	MINF 229	Probability Theory and Mathematical Statistics	2	1+0	4
3	MATH 259	Numerical methods- 1	2	2+0	5
4	CS 303	Parallel and distributed computing	2	1+0	4
5	MATH 391	Differential Equations	2	2+0	6
6	XXX XXX	[AE] Area elective course IV #6	2	2+0	6

Subtotal: 30

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№	Course code	Title	Th	Pr	Ects
1	MATH 441	Optimization Methods	2	2+0	5
2	COMP 313	Computer Networks	2	2+0	6
3	MM 120	Civil Defence	3	0+0	3
4	MATH 260	Numerical methods- 2	2	1+0	4
5	XXX XXX	[AE] Area elective course V #7	2	2+1	7
6	XXX XXX	[AE] Area elective course VI #8	2	2+0	5

Subtotal: 30

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No	Course code	Title	Th	Pr	Ects
1	IT 402	Artificial Intelligence	2	2+0	4
2	XXX XXX	[AE] Area elective course VIII #9	2	2+0	6
3	XXX XXX	[AE] Area elective course X #10	2	2+1	7
4	XXX XXX	[AE] Area elective course IX #11	2	2+1	7
5	XXX XXX	[AE] Area elective course VII #12	2	2+0	6

Subtotal: 30

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No	Course code	Title	Th	Pr	Ects
1	CS 490	Internship	0	0+0	30

Subtotal: 30

Total ECTS credits: **240**

AE - Area Elective Courses

No	Course code	Title	Th	Pr	Ects
1	CS 105	Introduction to computer science	2	2+0	8
2	CS 107	Mathematical programming	2	2+0	8
3	BA 250	Fundamentals of management	1	1+0	3
4	ECON 230	Engineering Economics	1	1+0	3
5	IT 230	Object Oriented Programming	2	2+0	5
6	IT 224	Introduction to multi-platform programming	2	2+0	5
7	IT 319	Mobile application development- 1	2	2+0	6

8	IT 317	Modern Programming Languages- 1	2	2+0	6	
9	IT 344	Modern Programming Languages- 2	2	2+1	7	
10	IT 378	Mobile application development- 2	2	2+1	7	
11	COMP 468	Computer Aided Design	2	2+0	5	
12	COMP 344	Computer Graphics	2	2+0	5	
13	COMP 328	Internet Technologies	2	2+0	6	
14	IT 485	Database programming	2	2+0	6	
15	CENG 402	Cybersecurity	2	2+1	7	
16	IT 469	Neurocomputers and neural networks	2	2+1	7	
17	IT 467	Fuzzy logic and expert systems	2	2+1	7	
18	CENG 475	Data Mining and Storing	2	2+1	7	
19	IT 471	Machine Learning	2	2+1	7	
20	IT 487	Data analytics and information management	2	2+0	6	
21	CENG 303	Computer modeling	2	2+0	6	

<u>NAE - Non-Area Elective Courses</u>						
No	Course code	Title	Th	Pr	Ects	
1	SOC 185	Ethics and aesthetics	2	0+0	3	
2	SOC 155	Introduction to Multiculturalism	2	0+0	3	
3	PHIL 140	Philosophy	2	0+0	3	
4	SOC 111	Sociology	2	0+0	3	
5	LAW 112	Constitution of the Republic of Azerbaijan and fundamentals of law	2	0+0	3	
6	PHIL 150	Logic	2	0+0	3	
7	PLT 101	Political science	2	0+0	3	
8	BA 248	Principles of Entrepreneurship and Introduction to Business	2	0+0	3	
9	IT 251	Information management	2	0+0	3	
10	IT 255	Information technologies	2	0+0	3	
11	ENG 015	English for business and academic communication-1 (reading- writing)	0	6+0	5	
12	ENG 025	English for business and academic communication-2 (listening comprehension)	0	6+0	5	
13	ENG 040	English for business and academic communication-3 (for academic purposes)	0	6+0	5	

